

CLAIMS

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1. Receiver for code distribution multiple access transmission and parallel multiple access interference suppression, comprising:
- 5 - at least one multiple access interference suppression stage ( $ESI_i$ ) constituted by K channels, each comprising a correlation means (101, 102, 103) corresponding to a particular pseudorandom sequence and interference generation (111, 112, 113) and suppression (121, 122, 123) means, each stage delivering to the following stage K signals
- 10 ( $r_1^i, r_2^i, r_3^i$ ) at least partly freed from multiple access interferences,
- a final, decision stage (ED) constituted by K channels receiving the K signals from the K channels of the preceding suppression stage and each comprising a correlation means (141, 142, 143) corresponding to one of the pseudorandom sequences and decision means (151,
- 15 152, 153) delivering a data item ( $d_1, d_2, d_3$ ),
- means (131, 132, 133) for producing synchronization signals able to control the interference suppression means,
- means (161, 162, 163) for producing synchronization signals able to
- 20 control the decision means (151, 152, 153) of the final stage (ED), said receiver being characterized in that the means for producing the synchronization signals are constituted by K means (171, 172, 173) solely placed in the K channels of the final stage (ED), the K synchronization signals produced by said K means controlling the K decision
- 25 means (151, 152, 153) of the K channels of the final stage (ED) and the interference estimation means (111, 112, 113) of the K channels of the interference suppression stages ( $ESI_i$ ) following appropriate time shifts (181, 182, 183).
- 30 2. Receiver according to claim 1, wherein the K synchronization signals also control the K correlation means (101, 102, 103).
3. Receiver according to claim 1, wherein the K correlation means (141, 142, 143) of the K channels of the final stage (ED) are

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constituted by K matched filters with K pseudorandom sequences and the K correlation means (101, 102, 103) of the K channels of each interference suppression stage ( $ESI_1$ ) are constituted by K sliding correlators.

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